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Manhattan Project II:
To End the Threat of Nuclear War.

Undoing the Legacy of the Manhattan Project

The era of nuclear threats should end with the Cold War. But that is not what is happening today. One phase of the nuclear age--the period of superpower arms race and hostility--has come to a close, but another phase may be about to accelerate: the era of nuclear proliferation.

Happily, with the ending of confrontation between NATO and the late Warsaw Pact, the danger of any crisis erupting into all-out global nuclear war has diminished drastically. That very fact could reduce inhibitions against making or carrying out threats of nuclear attack in regional conflicts. The possible phase of new proliferation may actually increase the likelihood of limited nuclear wars, accidents, and nuclear terrorism.

All those possibilities will loom for a considerable period within and on the borders of the former Soviet Union, despite the recent unprecedented pledges of three of the four nuclear republics in what is now the Commonwealth of Independent States to denuclearize themselves in coming years. It will take time and dedicated effort to lay to rest what Secretary of State Baker described as "Yugoslavia with nukes." And the threat is even more plausible of nuclear materials, weapons or expertise metastasizing outward into the camp of emerging, unstable nuclear states or terrorists, insurgents, or criminal gangs.

Elsewhere, a two-sided nuclear conflict between India and Pakistan over Kashmir was narrowly averted, and little has happened to reduce the prospect of a recurrence.[1] Worldwide, although the risk of nuclear war between NATO and the former Warsaw Pact powers has virtually vanished, the chance that some nuclear weapons may be detonated somewhere and kill humans may be higher than before. Averting that catastrophe depends upon many things, including the activities of those, inside and outside of government, who believe that the era of nuclear danger <u>should</u> effectively end now: that it must and can decisively end, whether or not total physical abolition proves ultimately attainable.

Contrary to the opinion of some[2], such an end is not automatic. It has not yet been assured, despite the momentum of the current "disarmament race." This new race was admirably initiated by President Bush with his unilateral measures of September 27, 1991 and joined by Presidents Gorbachev and Yeltsin.[3]

Welcome as they are, none of their moves and proposals, particularly on the U.S. side, shows a decisive shift away from Cold War notions of the broad functions of and requirements for nuclear weapons in "superpower" arsenals. None adopts an appropriate posture from which to discourage proliferation.

Such a shift in posture awaits fundamental changes in the present policies of the United States and its major allies, which must rest on a new way of thinking about nuclear weapons. That means, above all, admitting no legitimate use for them other than, for a few devices, the deterrence of nuclear attack. And it means joining the Commonwealth of Independent States and virtually all the non-nuclear states in the world in regarding as illegitimate threats to initiate nuclear attacks--threats of "first use"--under any circumstances, and foregoing preparations or weapons designed to make such threats credible or to carry them out. We must come to see the existence of nuclear stockpiles beyond the lowest minimal deterrent level in any country, starting with the United States and Russia, as a threatening and urgent international problem, akin to global warming and ozone depletion, that needs to be dealt with cooperatively by humanity as a whole, led by the countries which are themselves the greatest contributors to the problem.

The technical and policy issues addressed by current proposals are still framed by the desire to deploy or store weapons in excess of these minimal levels until time to make use of them, and by such questions as how to retarget them meaningfully after losing their superpower enemy. We must shift our focus to irreversibly disabling them and guarding them safely until they can be dismantled. Planning should begin now to safeguard the radioactive residues indefinitely under international supervision.

Only if those of us in the United States act decisively and consistently on such a reconceptualization can we ask any other countries to forego nuclear weapons altogether, ask other nuclear states to restrain their buildup or use of threats, or expect effective international collaboration on enforcement. We cannot hope for any of these so long as we continue to test new nuclear warheads, insist on our freedom to initiate nuclear warfare, and maintain grossly excessive arsenals of thousands of warheads, as are currently envisioned after the most drastic cuts yet proposed by either side.

Policy change on each of these matters and other related ones such as restrictions on SDI spending, on individual weapons systems, or on the overall military budget, has a good deal of authoritative support outside the government at this time.[4] The approach which has traditionally been most effective is to pick out one or two of these at a time as priorities for lobbying, with some hope of overcoming expected resistance. The problem is that a

long, drawn-out, piecemeal approach is unlikely to have much effect on the proliferation process that is now close at hand.

To be effective, we need a dramatic and comprehensive package of coordinated changes in policies and programs among current nuclear states, expressing a fundamental change in our relation to nuclear weapons. Designing such a package requires informed discussion and analysis, agreement on priorities, and assignment of tasks and schedules. It will take a focused, coordinated effort of the highest urgency.

The main precedent for that kind of effort in the United States is the very one which launched the nuclear era: the Manhattan Project. The events of the latter half of 1991 have created new conditions that make 1992, the fiftieth anniversary of the birth of the Manhattan Project, precisely the right time to create Manhattan Project II.

The task of the second Manhattan Project is, as quickly and completely as possible, to undo the legacy of the first: <u>to free the earth of the threat of nuclear war.</u>

Difficult as the problem facing the original project was, the task of Manhattan Project II is more complex. Just one facet, the technical, scientific, engineering, and logistical problems of dealing with radioactive waste from dismantled warheads and from the cleanup of the entire nuclear complex, calls for the coordinated talents of physicists, chemists, and other scientists and engineers on a scale reminiscent of the original project. This would be a worthy basis for the conversion of the various national weapons labs. Reemploying the currently ill-paid weapons experts from the former Soviet nuclear complex in a Manhattan Project II could be especially valuable in encouraging them to resist the lure of covert weapons programs elsewhere.

But that is only one part of countering the international consequences of Manhattan Project I. Devising practical solutions and programs for freeing the world from nuclear threats and ridding it of most or all of its nuclear weapons has more varied political, psychological and physical dimensions than the original project. It faces even more obstacles. It is the very complexity and interdisciplinary nature of these tasks, along with their importance and urgency, that suggests the model of the Manhattan Project.

In contrast to the original, the new project would need to be overt and international, including Third World participants. Ideally, it would be a high-priority project of governments from the start. But while the major republics of the former Soviet Union, including Russia, seem now to share a commitment to the goals described above, that is not true of the present U.S. administration. Therefore, while some countries might collaborate

in the effort at a high governmental level from the outset, United States participation initially would have to be organized outside of government.

That is not a serious limitation on performing the conceptual and planning work of Manhattan Project II. More than enough American and international expertise exists outside government for these functions. But it means that, unlike the one fifty years ago, the project would not be operational and managerial from its beginning. Indeed, it would have to address how to bring about societal and ultimately Executive branch understanding of and consensus on its goals and programs.

Gaining US Presidential, Congressional and bureaucratic commitment to massive global reductions in nuclear arms and to effective opposition to proliferation, including willingness to offer the U.S. reciprocity that these require, will take more, this time, than the equivalent of an Einstein-Szilard letter to President Roosevelt. There is no time to lose.

Manhattan Project II cannot uninvent nuclear weapons. It cannot prevent later-generation weapons if development and testing, once ended, should later be resumed. Even physical elimination of all existing weapons, if that should come about, could not indefinitely prevent their return. The work of the original project will not ever be entirely undone. The danger it bequeathed can never be reduced to zero.

But these truisms do not mean that anything like the present levels of danger should be tolerated any longer. In a meaningful sense, near-abolition of nuclear weapons, 95%-99% destruction of current stockpiles, is an appropriate goal to be achieved by the end of this century. Radical, decisive transformations of the status quo can start this year. They are both essential and attainable in averting proliferation and in reducing to near-zero the risk of nuclear explosions.

Does the task of Manhattan II include total abolition of nuclear weapons? Even in the longer run, is this feasible, in the broadest practical sense? It seems too soon reliably to answer that question. Therefore it is too early to take a world of zero nuclear weapons as an immediate goal, one that defines the project and measures its worth and success. But it is not too early to be asking the question, to be addressing it seriously. From the outset, the long-run tasks of the project must include an effort to explore the conditions that could make abolition feasible.

American Policy: Encouraging Proliferation

The need for the effective denuclearization of the world should give a sense of urgency to a new Manhattan Project as great as that which inspired the original one fifty years ago. Then, the time pressure came from the prospect of a German bomb. Now it

reflects both a window of opportunity and the prospect of bombs in a host of new countries or terrorist groups.

Even before the breakup of the Soviet Union, many nations were on the verge of acquiring nuclear weapons. UN inspections revealed that covert traffic in technology had brought Iraq much closer to a bomb than had been realized. This had earlier proved true in Israel, India and Pakistan. It is speculated that the same might be the case in North Korea, Iran, Algeria and other states. Indeed, the UN uncovered in Iraq an effort of a scale, determination, and even technique (using multiple approaches in parallel) emulating closely the earlier American bomb project. The alternative to an effective Manhattan Project II may be a global profusion of Manhattan Project I's.

More recently, the dissolution of the Soviet Union with the desperate shortage of foreign exchange and the erosion of centralized authority and discipline in the former Soviet empire has presented the ominous possibility of a hemorrhaging abroad of nuclear technology, materials, perhaps finished weapons, and almost certainly nuclear expertise. Within months, the environment of international decisionmaking on the acquisition of nuclear weapons could be transformed. The nuclear option might come to be much cheaper, easier, quicker, safer than ever before, both for countries that have already secretly been pursuing it and for others considering joining the club. New members may include terrorist or other sub-governmental factions.

Meanwhile, US policies that have long tended to encourage proliferation continue. These include long-term selective tolerance for some covert nuclear weapons programs in, for example, Israel, India, South Africa and, until last year, Pakistan and Iraq.[5] The US maintains a massive nuclear arsenal after the end of the Cold War, resists radical cuts, and persists with nuclear testing in the face of a Commonwealth test moratorium. It insists on its right, and that of its NATO allies, to threaten or implement initiation of nuclear attack against non-nuclear challenges.

Beyond this, US policies continue to endorse the notion that the relative size of nuclear arsenals is an essential badge of status. The administration is determined to maintain nuclear "superpower" standing, insisting on a U.S. arsenal that is an order of magnitude larger than, and is projected always to remain "superior" to, all others aside from Russia's. Likewise, the US is providing crucial support to the anachronistic British program to triple its own nuclear force.

All these expressions of a need and right to rely heavily on nuclear weapons even in the absence now of any serious military threats to national security encourage potential nuclear states to to look toward nuclear weapons as the United States and its major allies always have: as having vital, multiple, legitimate uses, as

well as being unparallelled symbols of sovereignty, status and power.

Most dangerously, such potential proliferators are led by past and present American behavior to see the foreseeable uses of nuclear weapons as including threats of initiating nuclear attacks and the possible implementation of such nuclear first-use threats, issued either by or against themselves. Such prospects challenge them to acquire nuclear capabilities of their own, and perhaps even to enter a regional nuclear arms race--mimicking past superpower folly--to be able to deter, threaten or preempt nuclear attack.

Despite their present, admirable posture of nuclear renunciation, the republics of the former Soviet Union should not be regarded as indefinitely immune to such temptations, if the U.S. continues to pose them. On the very day President Bush announced his unilateral initiatives on tactical weapons and SAC alert last September, a leading civilian strategic analyst in Moscow was warning that for cost reasons there was likely to be "a resuscitation of nuclear weapons" in the posture and policy thinking of the states of the former Soviet Union, including Russia. Because of budget constraints and mounting insecurities, he reported, there was a growing conviction in Russia that "we cannot afford to defend our far-flung frontiers against the Chinese or Central Asians with conventional means alone."[6]

He was conveying the very reasoning that led President Eisenhower to adopt his "New Look" policy for defense budgets and strategy in 1953. Eisenhower placed primary reliance on first-use threats of nuclear weapons, which offered "more bang for the buck" than conventional forces. It is not reassuring that the same Russian analyst pointed out that this projected Russian policy was "just what NATO had done, after all."

The NATO doctrine that nuclear weapons were legitimate, cheap and effective substitutes for conventional forces led, over 30 years, to the seeding of Western and Eastern Europe with tens of thousands of Hiroshima-sized tactical weapons and to their backup by 25,000 megaton-range strategic weapons, mostly on hair-trigger alert. This Russian analyst was forecasting a replay in his own country of what was arguably the most irresponsibly dangerous policy choice ever made.

In fact, starting with President Bush's address within hours of this discussion on September 27, policy within Russia and the other nuclear republics took a decisively different direction, moving toward the rapid rollback of this 30-year buildup. But that spectacular shift is not irreversible, as President Yeltsin took pains to emphasize on his visit to New York and Camp David in early February. The latent lure of the Eisenhower New Look may persist for the Russian military.[7] This underlines the urgency of consolidating the new Commonwealth course as rapidly as possible,

with as much help as America and its allies can provide. And it means, above all, challenging and transcending the old way of thinking in official Washington.

Just how dangerous would a world of expanded proliferation be? In such a world, would another 40 years of limited wars and nuclears threats pass again without any of those weapons exploding on people? One answer might be: "Why not? Deterrence has worked, and chances are that it will continue to work among new nuclear states as among the old." This argument leads to a degree of complacency about proliferation among many analysts, both inside and outside governments. But its assumption that "deterrence has worked" safely enough in the past demands a closer look.

Over the past 30 years, nuclear superpowers have threatened, usually secretly, to use nuclear weapons in regional crises. New nuclear states are likely to use the same threats, in the same ways and with the same risks. More nuclear states making more threats in a wider variety of circumstances gives a higher overall probability of explosion.

This argument rejects the condescending implication that significant risk of nuclear war would emerge for the first time with the acquisition of nuclear weapons by "irresponsible, immature" leaders in the Third World. But it also presumes that the risk of nuclear war has been higher over the last 40 years than the world public has tended to believe (or was allowed to learn). With nuclear weapons in the hands of a greater number of leaders, individually no more but no less reckless than most American presidents of the last half-century, the long-term risk of nuclear explosions is higher still. That is no basis for complacency.

It is mistaken to believe, as most Americans do, that no U.S. nuclear weapons have ever been used since the attacks on Hiroshima and Nagasaki. American presidents, in particular, have used nuclear weapons in crises and limited wars on more than 20 occasions in Indochina, East Asia, Berlin, and the Middle East. They have used them in the way a gun is used when it is pointed at someone's head in a confrontation, whether or not the trigger is pulled.[8]

The Soviet Union, Israel,[9] and India and Pakistan have used nuclear weapons in the same way. The most recent example of such gambling was just a year ago, and it involved ambiguous and effective threats by a number of nuclear powers. Except for President Gorbachev, all of the national leaders involved in the crisis are still in office.

Five nuclear states were involved in the Gulf war, all arrayed against Iraq. At least two of them, the United States and Israel, and perhaps the British and French as well, had tactical nuclear weapons deployed in the region. The United States alone had close

to 500.[10] Not one of these four (the fifth, the Soviet Union, did not participate in military operations) refrained from using its nuclear weapons, to deter various non-nuclear challenges by Iraq. None of the four explicitly or tacitly ruled out possible nuclear first-use. Indeed, under public questioning, high US and other Allied officials pointedly refused to rule out the possible first-use of nuclear weapons against Iraq under various circumstances: in particular, if the Iraqis used chemical weapons extensively, which was regarded as highly likely.[11]

Others, speaking without attribution, went further. Major newspapers quoted British and French officers predicting that their forces would retaliate to gas warfare with deployed tactical nuclear weapons.[12] Meanwhile, published polls revealed high levels of support in the American public for initiation of US nuclear attacks against Iraq under several possible circumstances. In November, 1990, 49% thought nuclear weapons would be justified if Iraq used poison gas against American troops. In the weeks before the war, 24% of Americans favored the use of nuclear weapons "to quickly end any hostilities and save the lives of American troops," or to avoid becoming "bogged down in a stalemate with Iraq."

In late January, after only two weeks of air war and before the first ground skirmish, public approval for using "tactical nuclear weapons against Iraq if it might save the lives of U.S. troops" had risen to 45%.[13] These levels of public support for U.S. nuclear first-use were two to four times higher than any recorded during any point of the Korean or Vietnam Wars, at the height of ground combat and American casualty rates.

The collection and publication of such polling data during the war was itself surely read as a threat in Baghdad. American citizens' strong support for possible nuclear first-use against a non-nuclear opponent probably reflected the new public confidence that such an initiative would no longer lead to a US-Soviet nuclear exchange. Similar confidence in other populations and leaders could unleash future nuclear threats or attacks in the post-Cold War era.

Fear of a nuclear response, perhaps above all from Israel, may have been a major factor in the otherwise unexplained Iraqi failure to employ any of their large supply of chemical shells, bombs or warheads. Inference of successful use of nuclear weapons, with public support, could encourage both proliferation and imitation of such threats in future conflicts. Others in the Third World have probably drawn the lesson that Iraq would have been spared these threats, and would not have suffered the heavy bombing it received, if only Saddam Hussein's nuclear proliferation efforts had been successful before the conflict. This thought is yet another spur to proliferation.

Nevertheless, some analysts privately find another basis for complacency. They believe that some nuclear state in the future might indeed carry out such a threat, but that the first instance of this would also be the last. In this view, an act of tragic foolishness by one of the new, inexperienced nuclear states is probably inevitable. But perhaps the sooner the better, because a new concrete demonstration of the destructiveness and futility of even the smallest nuclear attack is exactly what is needed to mobilize world opinion and action effectively against nuclear weapons.

But suppose Saddam Hussein had mounted chemical gas warheads on some of the missiles he delivered on Tel Aviv. Suppose enough had gotten through to cause major civilian casualties. If the Israelis had then disclosed part of their nuclear arsenal by launching some tactical nuclear weapons against Iraqi troops massed in the desert far from civilians (or even against an Iraqi city) it is not at all clear that there would have been, in fact, mass world revulsion, or condemnation of the Israelis for this use of nuclear weapons. The destruction of Iraqi military targets might well have been seen as successful and appropriate. Even a revenge strike on a city might not have been regarded, outside the Arab world, as wholly unjustified for the Israelis under the circumstances of this new, unprovoked instance of killing-Jews-by-gas.

Likewise, as the polls in America foretold, a limited nuclear attack by any of the nuclear Allies on an Iraqi military target in response to a major Iraqi chemical gas attack might have been seen as a dazzling demonstration that there was such a thing after all as an appropriate, necessary, successful, legitimate and meaningfully limited nuclear attack. And that late demonstration could have had the most ominous implications for the future, in terms of proliferation, new arms races, nuclear planning and employment, terrorism, the end of disarmament...and ultimately the prospects of human survival.

The point here is not dependent on the particularities of this hypothetical example. It could be, as the analysts cited believe, that the first nuclear explosion on humans since Nagasaki would tilt world opinion decisively toward effective control or abolition of nuclear weapons, ending the nuclear era. But it seems very much more likely that it would have the opposite effect, or a mixed effect, even if it did not seem justified, or successful.

By its very occurrence, by the failure of deterrence, such an explosion may convince many that the era of nuclear bluffs has at last given way to the era of nuclear wars. They may conclude variously that efforts to reduce nuclear weapons or prevent proliferation are futile and unsafe, a precedent has been set that makes nuclear weapons usable in combat and henceforth sure to be used, nuclear umbrellas extended by others are unreliable, and the world has suddenly become more dangerous in ways that can only be

guarded against or exploited by one's own possession and diligent modernization of nuclear arms. The very horror of the event, unprevented by the world community, could cause a turn toward national military strength, including nuclear weapons, for security.

It seems important to avert even a single trial of these speculations, or the proliferation that increases the likelihood of a test.

Curtailing Proliferation: A "Demand-side" Approach

Trying to close off all technological access to nuclear weapons will never be enough to discourage others from following America's and NATO's nuclear example. The current "supply side" approach, by itself, can not succeed. Manhattan Project II must also bring about changes in official US policies that now enhance the demand for nuclear weapons by creating incentives for proliferation or making it seem legitimate.

US nuclear planning has rested on two specific premises which the American government must reverse if it is to help end the era of nuclear threats. First it must accept that the only appropriate and legitimate function of nuclear weapons is to deter nuclear attacks. Nuclear stockpiles must be limited to the types and the minimal numbers of weapons that are sufficient for this purpose. Second, the American government must adopt the corollary constraint of "no-first-use" of nuclear weapons, renouncing the willingeness and readiness to initiate nuclear warfare under any circumstances. This should be reflected in weaponry, doctrine, training and deployment. The latter principle was adopted as a commitment by the 11 republics of the Commonwealth of Independent States in their founding document in December, 1991. It has always been strongly opposed by the United States and rejected by the NATO governments, who are almost alone among nations in the UN in this stance.

Few Americans are aware of the extent to which the U.S. and NATO first-use doctrine has isolated the United States and its Western allies from world opinion. Nor are they familiar with the sharpness of the language used by UN majorities in resolutions condemning the policies on which NATO has based its planning. UN Resolution 36100, the Declaration on the Prevention of Nuclear Catastrophe, was adopted on December 9, 1981. It declares in its Preamble: "Any doctrine allowing the first use of nuclear weapons and any actions pushing the world toward a catastrophe are incompatible with human moral standards and the lofty ideals of the UN." The body of the text resolves: "States and statesmen that resort first to nuclear weapons will be committing the gravest crime against humanity. There will never be any justification or pardon for statesmen who take the decision to be the first to use nuclear weapons." 82 nations voted in favor of this declaration.

41 abstained; 19 opposed it, including the United States and most NATO member nations.

With an era of widespread proliferation looming, it should be unmistakably clear that accepting this resolution as a universal principle would be in the best interests of the United States and the rest of the world. The United States and its allies would join, at last, in a moral judgment that is already asserted by the majority of governments of the world. This would have to be expressed by more than a changed vote in the UN. It would have to be demonstrated in massive changes in force posture, doctrine, readiness, and underlying public attitudes. This will require a strenuous political process. It is late in the day for an American national change of heart to be wholly impressive to others. But we must plan and act as if it were not too late. It is hard to exaggerate the difference that a real change in the direction of American influence might possibly make in the world.

The restriction of nuclear functions to deterrence of nuclear attack, especially when reinforced by the renunciation of intent to threaten or carry out nuclear "first use" attacks initiating nuclear warfare, implies a force posture traditionally described as "minimum deterrence." Although this seems to correspond to a "principle of minimum defense sufficiency" promoted by President Yeltsin, no government has yet suggested, let alone committed itself, to unilateral or mutual reductions and constraints that would come close to embodying this policy.

As of February 1992, both parties propose to keep sizeable numbers of tactical nuclear weapons. Virtually all of these weapons are vulnerable to nuclear attack, especially when they are deployed close enough to a combat front to be used at all. Thus, they are weapons only for first-use or for use against non-nuclear opponents. Recent proposals would store most of these weapons, rather than destroying them. These proposals are welcome for crisis stability, but they do not acknowledge the imprudence of substituting nuclear forces for more expensive conventional strength. Nor do they deny legitimacy to first-use threats.

If these continue to be acceptable aims for the nuclear programs of the United States and Russia, even after their own overarching confrontation has ended, there is simply no logical argument for denying either the legitimacy or reasonableness of nuclear arsenals sized and shaped to the same ends in other countries. This is especially true for countries such as Pakistan and Israel, who face regional opponents with much larger conventional forces. This, after all was the historic rationale for NATO's reliance on first-use nuclear threats.

The US-proposed elimination of land-based MIRVd ICBMs and its halt to production of silo-busting, first-strike weapons are important steps toward strategic stability. Halving START ceilings

and curtailing modernization will save sizeable costs. But the START process, at least on the U.S. side, has never aimed at radical reductions or at abandoning "extended deterrence" based on first-use threats, steps necessary to discourage proliferation. Moreover, the US is now trying to erode the single most effective arms control agreement restraining a defensive (and hence an offensive) arms race: the 1972 Anti-Ballistic Missile Treaty. The Russians have recently shown a new willingness to accede to US demands. This threatens to counteract the new progress both in stability and cost terms. This is especially true if, as President Yeltsin warns, a later Russian regime emerging from chaos should renew wasteful military competition.

President Yeltsin has suggested mutual cuts down to 2500 or 2000 warheads. President Bush proposed a limit of 4500 warheads. These lowered but enormously high levels still reflect a traditional preemptive first-strike approach aimed at supposedly limiting damage to the attacker in an escalation to all-out war. Either level is far in excess of what could be justified by the requirements of the single goal of deterring nuclear attack.

There is no precise, objective figure that can be given for the force requirement for "minimum deterrence." Dr. Herbert York, echoing McGeorge Bundy, has made a plausible argument that the number needed to deter the kind of adversary who can be deterred at all is "somewhere in the range of 1, 10, or 100" survivable, deliverable warheads. He adds that it is "closer to 1 than it is to 100."[14] All acknowledged existing arsenals, as well as Israel's, exceed this standard. President Yeltsin's proposal for Russia's "deterrent" force would exceed this limit by twenty times, and would remain four times larger than the current or proposed arsenals of Britain or France. It is therefore understandable that those countries have resisted President Yeltsin's proposals that they begin simultaneously reducing their own forces on the basis of a common "principle of minimum defense sufficiency."

The United States currently can bring even less moral force to bear against creation or expansion of other national nuclear arsenals. President Bush proposes to maintain nuclear superpower status for the United States and Russia with joint forces twice as high as President Yeltsin has suggested. To be sure, even Secretary of Defense Cheney has started to talk the language of minimum deterrence. "We're moving into a new era where clearly the impetus is to shrink the stockpiles on both sides and going down to some minimal level that's required for maintaining our deterrent capability," he said recently to Pentagon reporters.[15] But the same day that quotation appeared in print, Cheney criticised President Yeltsin's proposed ceiling of 2500 warheads as inadequate. It seems evident that the Bush administration's criteria for "minimal levels" are very different from those of Herbert York, and that deterrence of nuclear attack is not the only function U.S. officials have in mind. Nor do they yet accept any

standard of "minimum defense suffiency" that could put pressure on the British, French, Chinese or Israeli arsenals.

Indeed, it would be interesting to hear President Bush or Secretary Cheney explain why, if both sides have the same number of weapons, the US would prefer that the Russians have 4000 warheads, rather than 2000 or less, within range of US targets. Secretary Cheney frequently questions whether future Russian regimes will be as unthreatening or as cooperative as the present one. Precisely for that reason, it is urgent for the United States to get commitments from the current leaders to disable as many Russian strategic missiles as they will agree to. The Americans should offer reciprocal cuts, and give financial and technical aid to carry out disabling and dismantling as fast as is physically possible.

The Need for Reciprocal Transparency

The end of the Cold War and the initial nuclear allergy of the new Commonwealth republics have created an unprecedented opportunity for collaboration by major nuclear states on quick and radical reductions in, or in some cases elimination of, their own nuclear arsenals.

For the first time in the nuclear era three states--Ukraine, Belarus and Kazakhstan--that could claim to possess operational nuclear capability have renounced that status. In particular, the intense Ukrainian desire to become a nuclear-free zone as quickly as possible, because of the experience of the 1986 Chernobyl disaster, is unparalleled for a state now harboring nuclear weapons on its territory. Ukraine intends to remove and destroy all the weapons within its borders, including the third largest collection of strategic weapons in the world, by the end of the century. Tactical weapons should be removed by the middle of this year. There could be no better partner to institute internationally supervised procedures of registering, disabling, safely transporting, storing and dismantling nuclear warheads, and permanently safeguarding radioactive residues.

However, national pride demands that Ukraine, like Russia, North Korea and other nuclear or near-nuclear states, still looks for reciprocity from the United States if there is to be any bilateral or international inspection, monitoring or participation in the disarmament process. It seems a simple and reasonable demand. At any rate, it is the price for Ukrainian and Russian agreement to international verification measures of great importance.

Such reciprocal openness and constraint is not forthcoming from the Bush administration. This is a crucial time, before Ukrainian attitudes shift, and, we can only hope, before nuclear materials, warheads or experts have escaped existing controls. The administration appears to feel that retaining its own full freedom

of future action from any external restraint must take priority. This includes the freedom to recycle fissionable material from dismantled warheads into new US weapons.[16]

Without U.S. willingness to submit to bilateral or international inspection, the transport of nuclear weapons out of Ukraine headed for destruction in Russia will not be halted or even slowed. Instead, it will take place without the kind of verification that can reassure the international community that sizeable numbers of weapons have not been retained or diverted. At least two problems follow. First, current Russian confidence that national controls are thoroughly adequate to prevent diversion of weapons or materials may be misplaced. Second, whether that is true or not, international uncertainty on this matter will eventually be cited as an obstacle to adopting radically lower levels of deterrent nuclear capability.

Manhattan Project II: Specific Aims and a Timetable

What might an overall staged timetable look like? The original project of 1942--after an earlier gestation period of three years--designed and delivered a bomb in three more years. The following proposed schedule of successive targets--with one-year, three-year and end-of-decade deadlines--exemplifies the kind of planning and recommendations the new project might produce: for action by the next administration or, if necessary, by Congress through the budgetary process if current officials persist in their record of opposition to the measures below.[17]

By Mid-1993:

Within an initial target date of one year from now--a shorter deadline than would have seemed at all plausible before the latest U.S.-Commonwealth initiatives--the U.S. government should:

--join the Commonwealth of Independent States in adopting the principles of minimum deterrence and no-first-use of nuclear weapons; reject in principle and practice the use of nuclear weapons as an instrument of policy or warfare, restricting remaining devices--in minimal numbers, separated physically and organizationally from regular military commands and forces--to the single function of deterring nuclear attack;

--end nuclear testing: joining the Commonwealth in a moratorium on nuclear testing while negotiating a permanent Comprehensive Test Ban Treaty, as provided in the preamble of the Partial Test Ban Treaty and "recalled" in the preamble of the Non-Proliferation Treaty;

--commit itself to disable and dismantle--not merely withdraw from deployment--all tactical nuclear weapons, air-launched as well as sea- and land-based;

--commit itself not to reopen the production of weapons-grade fissionable materials, or to reuse material from dismantled warheads in new weapons;

--suspend indefinitely the production of new nuclear warheads, while seeking a permanent, inspected international ban on production of warheads and of weapons-grade fissionable materials;

--commit itself to adhere to the provisions of the Anti-Ballistic Missile treaty, narrowly interpreted;

--eliminate multiple-warhead (MIRVd) land-based missiles and existing silo-busting sub-based warheads, and seek a mutual interim ceiling on total U.S. and Russian strategic weapons of no more than 1000 warheads, preferably 500 or 100.

Since all of these steps, except for the last two, were proposed on a bilateral basis by former Soviet President Gorbachev in October, 1991 with the concurrence of Russian President Yeltsin and the leaders of the other republics, there is every reason to expect that they would promptly be matched by Russia and the rest of the Commonwealth.

The ABM treaty adherence runs counter to suggestions by President Yeltsin in early February as well as to the long-held position of President Bush, but it is important to avoid a vastly wasteful and strategically destabilizing "jobs program" in both countries and to avert later pressures to reintroduce MIRVing and to renew the strategic offensive arms race.

Very early in this first year the United States must address the need for reciprocal transparency addressed above. Thus, as a precusor to the other steps:

--The United States should propose the registration and tagging of all nuclear weapons in the world, including those in the United States. It should offer funding from its defense budget this year for registering and tagging, as quickly as possible, all nuclear weapons in the Commonwealth, and for the safe storage and handling of weapons to be disabled and dismantled.

--U.S. facilities should be made open to the same international verification and monitoring procedures for the disarmament and dismantling process that are demanded of the Commonwealth and other nuclear states. Rather than prioritizing industrial secrets or maintaining the freedom to reuse nuclear materials in new weaponry, the United States should set a model of transparency to the world in these matters.

The three-year period of the original project suggests the next target date; it would bring us to 1995, the fiftieth anniversary of the Alamogordo test and the bombing of Hiroshima,

the first demonstrations of nuclear destruction. 1995 is also the year of the Non-Proliferation Treaty renewal conference, which could be the beginning of the end of the formal nonproliferation regime if the programs above and below, in particular an end to testing, are not achieved.

By August, 1995:

Mid-1995 should be the deadline for the permanent end of nuclear testing and the production of fissile material by any state, as well as for achieving commitments on the part of all nuclear states of the world to:

--the principles of no-first-use of nuclear weapons and their practical restriction to the single function of deterring nuclear attack;

--abolition of tactical nuclear weapons, with total dismantlement of them by the year 2000;

--near-abolition of strategic weapons by the year 2000: 95% or more reduction from present superpower levels, down to 500 warheads at most and preferably 100 or less in any nuclear state;

--along with all other nations, adherence to a strengthened anti-proliferation regime and the Non-Proliferation Treaty, including, at last, its disarmament aims, as stated in both its preamble and Article VI.

Accompanying the commitments outlined above to nuclear policy goals, major programmatic efforts should already be underway by 1995 toward their realization by the third target date.

By 2000:

Achieving these goals by the end of the decade will substantially end the era of nuclear threats with the millenium.

1. Los Angeles Times, January 19, 1992: "Terrifying Pursuit of Nuclear Arms," John M. Broder and Stanley Meisler. "Just how close the world came to its first nuclear war that spring has been one of the best-kept secrets in Washington. Officials believe that it was only the timely intervention by the United States, and parallel entreaties from Moscow, Beijing and several European governments, that prevented all-out war involving nearly a fifth of the world's population."

2. See the title and subtitle of an otherwise excellent article by William M. Arkin, Damian Durrant, and Hans Kristensen in the Bulletin of Atomic Scientists, December, 1991: "Nuclear Weapons Headed for the Trash: Whether he intended it or not, Bush has taken the steps that mean the beginning of the end for nuclear weapons." The body of the analysis is more nuanced than this and is closely in line with the thoughts presented here, but the authors' confidence that the steps already taken by Presidents Bush and Gorbachev--even when followed up by the further important initiatives and proposals by President Bush and President Yeltsin in January and February, 1992--"practically guarantee" the "end of the nuclear age" seems overstated, in a way that seriously underrates the need for extra-governmental thinking, planning and political pressure of the kind discussed here.

3. For an appreciation and critique of these unprecedented initiatives and responses, see "Nuclear Security and the Soviet Collapse," interview of Daniel Ellsberg by Jerry Sanders and Richard Caplan, World Policy Journal, Winter 1991-92. Several passages in this paper are drawn from that interview, and others are elaborated there.

4. See in particular: "The Future of the U.S.-Soviet Nuclear Relationship," Committee on International Security and Arms Control, National Academy of Sciences (Washington, D.C., 1991); "The START Treaty and Beyond," Congressional Budget Office, October, 1991; Decisions for Defense: Prospects for a New Order, William W. Kaufmann and John D. Steinbruner, The Brookings Institution (Washington, D.C. 1991); "The Nuclear Threat: A Proposal," Hans A. Bethe, Kurt Gottfried, and Robert S. McNamara, The New York Review, June 27, 1991; "Nuclear Weapons After the Cold War," Carl Kaysen, Robert S. McNamara and George Rathjens, Foreign Affairs, Fall 1991; "Counting the Costs of the Arms Race," George Perkovich, Foreign Policy No. 85, Winter 1991-92; "U.S. Military Agenda for 1992 and Beyond," The Defense Monitor, Vol. XX, No. 6, 1991, Center for Defense Information, Washington, D.C.

5. On Israel and Pakistan, see Gerard C. Smith and Helena Cobban, "A Blind Eye to Nuclear Proliferation," Foreign Affairs, Vol. 68, No. 3, Summer 1989. For much more on Israel and on the divergence

between American officials' private attitudes toward proliferation among friendly nations and U.S. declaratory policy opposing it, see the investigative study by Seymour M. Hersh, The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy, New York, 1991.

6. Discussion with Andrei Kortunov, Institute for the Study of USA and Canada, September 27, 1991.

7. Several months after the discussions with Andrei Kortunov prompted this reflection--published in my World Policy Journal interview, op. cit.--this point is made in almost these precise words by Stephen Meyer at the end of an article appearing in late-January, 1992 ("How the Threat (and the Coup) Collapsed: The Politicization of the Soviet Military," International Security, Vol. 16, No. 3, Winter 1991/1992, p. 38. In his final section, "Soviet Military Power in the Next Decade: A Nuclear Solution?" Meyer draws the same conclusions as Kortunov as to the logic that may tempt future Russian planners to substitute nuclear strength for more expensive conventional forces, as the Soviets did in the early 1960's.

8. See the list of a dozen instances, with references, in "A Call to Mutiny," Daniel Ellsberg, introduction to Protest and Survive, ed. E.P. Thompson and Dan Smith (New York, 1981). A longer list, in an unpublished manuscript of 1986, is available from the author. A number of these episodes are discussed in Nuclear Blackmail and Nuclear Balance, Richard K. Betts (Washington, D.C., 1987). Some of these threats--many of which were concealed, then and later, from the American public, though they were obviously not secrets to the foreigners threatened--were regarded by the Presidents and some of their close advisers as successful. Others were not. Most of them were ambiguous, in greater or less degree. Some of the threats, successful or not, were regarded by the presidents as bluffs or partial bluffs; but in no case did that mean there was no danger of escalation. To menace someone with a gun one believes to be unloaded is not without risk, indeed a variety of risks, to both parties and to others in the vicinity.

9. See Seymour M. Hersh, op. cit., particularly Chapter 17, "Nuclear Blackmail," on Israel's threats in the 1973 Middle East war. Hersh's title refers to a use of nuclear weapons, intended from the beginning of Israel's covert program and applied successfully in 1973, to coerce an ally, the United States, into more prompt and decisive non-nuclear support in a crisis than might otherwise have been forthcoming, by the threat that otherwise Israel might feel forced to initiate nuclear warfare, against allies of the Soviet Union or the Soviet Union itself. The same tactic was meant to intimidate the Soviet Union into restraining or limiting support to its allies, Israel's opponents. France was the

first to arm itself to pursue this sort of possibility, and Israel may not be the last.

10. William Arkin, "Huge Nuclear Force in Gulf," San Francisco Chronicle, December 12, 1990, p. 3.

11. On February 2, two weeks into the air war, a Los Angeles Times story by William Tuohy with the headline, "Quayle Refuses to Rule Out U.S. Nuclear Attack" reported from London: "After a morning meeting with British Defense Secretary Tom King, [Vice President] Quayle was asked about possible U.S. us of nuclear weapons against Iraq...The use of nuclear weapons, he said, is 'always an option, an option you are not going to rule out.' While President Bush has said that he has no plans to use nuclear weapons, the allied commander in Saudi Arabia, Gen. H. Norman Schwarzkopf, has said that the rules could change if the Iraqis use weapons of mass destruction first. Defense Secretary Dick Cheney also refused to rule out the nuclear option just a few days before the war began."

12. For example, under the main headline, "UK will go nuclear if forces gassed, claims Army man," the lead story in the Sunday Observer, September 30, 1990 by Adam Raphael begins: "A senior officer attached to Britain's 7th Armoured Brigade, who left for the Gulf yesterday, claims that if they are attacked with chemical gas by Iraqi troops, they will retaliate with battlefield nuclear weapons. The Ministry of Defence refused to confirm this last night, but this is the first unofficial indication that British troops may be authorised to use nuclear weapons to defend themselves if attacked." In commenting on the Observer story, Prime Minister Margaret Thatcher said she "knew of no authority" for the report, but did not deny the option, stating, "You'd have to consider at the time, if chemical weapons were used against us, precisely what our reply would be." (Arkin, op. cit.)

13. Time, December 10, 1990, p. 42; Newsweek, January 14, 1991, p. 17; George Black, "Just How Far is Bush Prepared to Go in War?" Los Angeles Times, February 17, 1991, p. M7.

14. Herbert F. York, "'Remarks' about Minimum Deterrence," Lawrence Livermore Natonal Laboratory, CTW-12-90, January 25, 1991, "I have long regarded the remarks that McGeorge Bundy made, shortly after he left his position in the mid-1960s as National Security Advisor to Presidents Kennedy and Johnson, as cutting to the core of the situation. In sum, he said that, in the real world of real political leaders, any policy which in advance was known to bring a single hydrogen weapon on a city of one's own country, would be regarded in advance as a catastrophic blunder. Ten weapons on one's own country would be a disaster beyond history, and then he ended by saying that 100 is unthinkable....And there may very well be irrational people with nuclear weapons, but I do not think they practice the kind of calculus that is relevant to the notion that

even 5000 deter. Thus, as far as rational people approaching the question of nuclear weapons falling on themselves, somewhere between 1, 10, and 100 is the answer to what it takes to deter, and for irrational leaders there may be no answer at all." (pp. 1-2). The reference to McGeorge Bundy is to his article, "To Cap the Volcano," Foreign Affairs, Vol. 48, No. 1, October, 1969, p. 10.

15. Washington Post, Sunday, February 2: "New Era of Nuclear Disarmament," Don Oberdorfer and R. Jeffrey Smith, p. A26.

16. For a thorough discussion of this problem, see "So Little Time, So Many Weapons, So Much To Do," by Christopher Paine and Thomas H. Cochran, Bulletin of Atomic Scientists, January/February 1992, pp. 13-16. On Administration motives for resistance, see William Broad, "Nuclear Designers From East and West Plan Bomb Disposal," New York Times, December 17, 1991, p. C1.

17. The latter approach through legislative action is somewhat more than a theoretical possibility, especially with the widespread perception in Congress and the public that the administration, for all its recent initiatives, is still responding inadequately to the ending of the Cold War. It is not widely realized that even under earlier conditions, Congress--pressed by a combination of expert briefings, influential lobbying and mass grassroots organizing--succeeded in enforcing against strong administration desires the American side of a highly important bilateral moratorium on testing of antisatellite weapons. And majorities in the House have repeatedly voted in favor of cutting off funds for U.S. nuclear testing in the context of Soviet moratoriums like the current one, which Russia has confirmed.